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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,309	12/18/2000	Sehjoon Dokko	P-156	2257
34610	7590	07/27/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			IQBAL, KHAWAR	
			ART UNIT	PAPER NUMBER
			2686	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/738,309

Applicant(s)

DOKKO, SEHJOON

Examiner

Khawar Iqbal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-10,14 and 26-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-10,14,26-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4,6-10 and 14,26-31 rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson (6483820) and further in view of Ibaraki et al (6590865).

Regarding **claim 1** Davidson teaches a method for allocating channels for radio data calls comprising (figs. 1-5):

receiving a data call connection request (col. 4, lines 12-30);

determining a traffic attribute of the data call (col. 4, lines 12-60);

determining an occupied bandwidth of each of a plurality of channels of a transmission link occupied by other connected calls (col. 4, lines 12-60,col. 5, lines 1-45); and

dynamically allocating the data call among the plurality of channels based on the traffic attribute and the occupied bandwidth (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65). Davidson does not specifically teach wherein a mobile switching system subtracts an occupied channel bandwidth from a maximum allowable channel bandwidth to determine whether there is a minimum available bandwidth in each channel, and allocates the channel having the least occupied bandwidth when no channel has the minimum available bandwidth.

In an analogous art, Ibaraki et al discloses a bandwidth allocation teaching in witch as approaches wherein a mobile switching system subtracts an occupied channel bandwidth from a maximum allowable channel bandwidth to determine whether there is a minimum available bandwidth in each channel, and allocates the channel having the least occupied bandwidth when no channel has the minimum available bandwidth col. 11, lines 21-56, col. 12, lines 9-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Davidson by specifically adding feature in order to enhance system performance of the system purpose of allows bandwidth to be flexibly managed by reconsidering all Allocations as taught by Ibaraki et al.

Regarding **claim 2** Davidson teaches wherein a bandwidth of the data call is determined based on the traffic attribute and the bandwidth occupied by the other connected data calls is determined based on a number of other data calls and prescribed weight values of each of the other data calls (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65, also see claim 1).

Regarding **claim 3** Davidson teaches wherein the weight value is allocated in a unit form according to a rate of the bandwidth (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65, also see claim 1).

Regarding **claim 6** Davidson teaches wherein the maximum allowable bandwidth is 30 units (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65, also see claim 1).

Regarding claims **7,28,29** Davidson teaches a method for allocating channels for radio data calls comprising (figs. 1-5):

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receiving a data call connection request (col. 4, lines 12-30);
determining a traffic attribute of the data call (col. 4, lines 12-60);
determining an occupied bandwidth of each of a plurality of channels of
a transmission link occupied by other connected calls (col. 4, lines 12-60,col. 5, lines 1-45); and

dynamically allocating the data call among the plurality of channels based on the traffic attribute and the occupied bandwidth (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65), wherein a mobile switching system allocates a channel having the least available bandwidth if a requested bandwidth of the data call is greater than a prescribed bandwidth and the channel having an available bandwidth exists (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65, also see claim 1).

Regarding **claims 8,30,31** Davidson teaches a method for allocating channels for radio data calls comprising (figs. 1-5):

receiving a data call connection request (col. 4, lines 12-30);
determining a traffic attribute of the data call (col. 4, lines 12-60);
determining an occupied bandwidth of each of a plurality of channels of
a transmission link occupied by other connected calls (col. 4, lines 12-60,col. 5, lines 1-45); and

dynamically allocating the data call among the plurality of channels based on the traffic attribute and the occupied bandwidth (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65), wherein a mobile switching system allocates a channel having the least occupied bandwidth if a requested bandwidth of the data call is smaller than a

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prescribed reference bandwidth and the channel having an available bandwidth exists (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65, also see claim 1).

Regarding **claim 9** Basu et al teaches wherein the traffic attribute is determined based on a service option (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65, also see claim 1).

3. Claims 10, 14,26,27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson (6483820) and further in view of Ibaraki et al (6590865) and Yee et al (20020114301).

Regarding claims **14,26,27** Davidson teaches a channel allocation method for radio data calls, comprising (figs. 1-5):

receiving a data call connection request (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65);

determining a requested bandwidth based on a service option of a received data call; defining a weight value of the data call in accordance with the requested bandwidth (col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65); and

dynamically allocating an H.sub.0 channel on the based on a number of connected data calls occupying each of a plurality of H.sub.0 channels and the weight value of each connected data call wherein allocating the H₀ channel comprise: determining whether the requested bandwidth is greater than a reference bandwidth; computing a bandwidth occupied by the connected data calls(col. 4, lines 12-60,col. 5, lines 1-45,col. 6, lines 12-65). Davidson does not specifically teach subtracting the occupied bandwidth from a maximum allowable bandwidth for each H.sub.0 channel, to

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determine whether any available bandwidth exists in each H.sub.0 channel; and allocating an H.sub.0 channel having the least occupied bandwidth if no H.sub.0 channel exists; allocating a H.sub.0 channel having the largest available bandwidth if the requested bandwidth is greater than the reference bandwidth and a H.sub.0 channel having available bandwidth exists; and allocating a H.sub.0 channel having the least available bandwidth if the requested bandwidth is smaller than the reference bandwidth and a H.sub.0 channel having available bandwidth exists.

In an analogous art, Ibaraki et al discloses subtracting the occupied bandwidth from a maximum allowable bandwidth for each H.sub.0 channel, to determine whether any available bandwidth exists in each H.sub.0 channel; and allocating an H.sub.0 channel having the least occupied bandwidth if no H.sub.0 channel exists; allocating a H.sub.0 channel having the largest available bandwidth if the requested bandwidth is greater than the reference bandwidth and a H.sub.0 channel having available bandwidth exists; and allocating a H.sub.0 channel having the least available bandwidth if the requested bandwidth is smaller than the reference bandwidth and a H.sub.0 channel having available bandwidth exists (col. 3, lines 1-64, col. 11, lines 21-56, col. 12, lines 9-61, figs 2-4,11,15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Davidson by specifically adding feature in order to enhance system performance of the system purpose of allows bandwidth to be flexibly managed by reconsidering all Allocations as taught by Ibaraki et al.

Regarding **claim 10** Davidson and Ibaraki et al do not specifically teach E1 link.

In an analogous art, Yee et al teaches E1 link (paragraph # 0092). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Davidson by specifically adding feature E1 link to support the multimedia call in order to enhance system performance of the system purpose of increasing efficiency telecommunication system as taught by Yee et al.

4. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson (6483820) and further in view of Ibaraki et al (6590865) and Martin et al (5960039).

Regarding **claim 4** Davidson does not specifically teach 128 Kbps-based high speed data call comprises 10 units. In an analogous art, Martin et al teaches 128 Kbps-based high speed data call comprises 10 units (col. 7, lines 7-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Davidson by specifically adding feature 128 Kbps-based high speed data to support the multimedia call in order to enhance system performance of the system purpose of increasing efficiency as taught by Martin et al.

Response to Arguments

5. Applicant's arguments filed 06-07-05 have been fully considered but they are not persuasive. Examiner has thoroughly reviewed applicant's arguments but firmly believes the cited reference to reasonably and properly meets the claimed limitations. Applicant's argument was that "allocates the channel having the least available bandwidth when a channel exists having the minimum available bandwidth". In response, examiner would like to point out that Davidson teaches more efficient

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utilization of the radio resources may be had by implementing a dynamic, demand-based management of HSCSD traffic channel allocation. An IWF is executed that monitors the status of the buffers in the GIWU. If the IWF detects the need for additional radio resources, i.e., the network data transfer exceeds the terminal traffic channel capacity; the MSC/VLR 240 is instructed to assign an additional channel(s).

Likewise, if the IWF detects that the previously allocated radio resources are underutilized, the MSC can be instructed to release a channel(s) (col. 6, lines 1-55).

Ibaraki et al teaches the communications system has a number of units (2) on a transmission line (31) with a resource manager unit (1). Each unit can issue a request for bandwidth to the manager. The request can be for constant or available bit bandwidth defined between minimum and maximum bandwidths. The manager calculates if the bandwidth can be allocated within the sum of minimum allocated bandwidths. If so, a positive acknowledgement is issued including an agreed bandwidth. The bandwidth management 12 receives a bandwidth allocation request including a requested bandwidth, a priority, and an apparatus IDs, from the bandwidth allocation 21. While the requested resource comprises the requested maximum bandwidth and the requested minimum bandwidth like the first embodiment, it may include at least the requested minimum bandwidth. The bandwidth management 12 decides whether or not the requested bandwidth of the bandwidth allocation request is allocatable. When it decides that the requested bandwidth is allocatable, the bandwidth management 12 allocates the bandwidth, and adds a sequence number indicating that the corresponding request is the most recent, to update the allocated-resource request

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table. Then, the bandwidth management 12 sends "ACK" to the bandwidth allocation 21, to notify it that the request has been accepted (col. 3, lines 1-64, col. 11, lines 21-56, col. 12, lines 9-61, figs 2-4, 11, 15).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Khawar Iqbal whose telephone number is (571) 272-7909.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone

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number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Khawar Iqbal


CHARLES APPIAH
PRIMARY EXAMINER